1   Profile data in FTIR HDF files
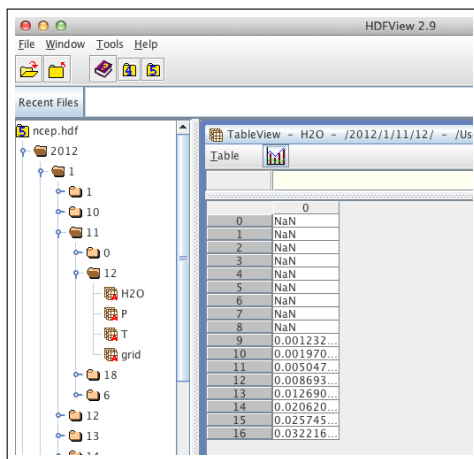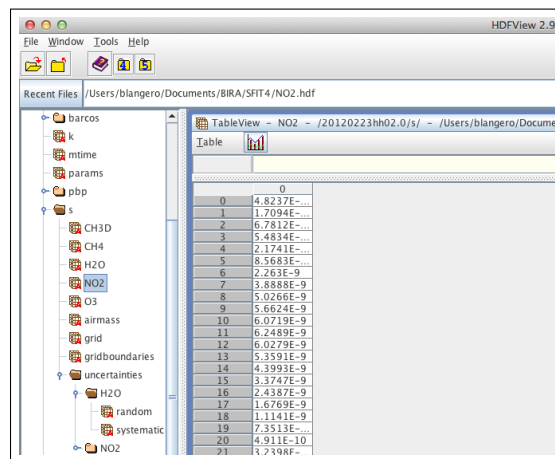
▷ Profile data or scalar and accompanying uncertainties are stored in SI units

▷ Uncertainty data are always covariance matrices (even for scalar quantities!)

▷ A subgroup of an HDF file that contains profile data will always have this structure

 ▸ *O3*: contains profile data

 ▸ *H2O*: contains profile data for the given species
   ⋮

 ▸ *grid*: contains the height grid of the profile

 ▸ *gridboundaries*: contains the boundaries array of the grid (with shape= (2,grid.shape)): first row is the row of lower boundaries, second row is the row of upper boundaries.

 ▸ *airmass*: contains the air column profile for the specified grid (this is for regridding purposes)

 ▸ *uncertainties*: a new subgroup with keys (*O3/random* or O3/systematic, . . .)

(a) NCEP database for Maido

(b) SFIT4 retrieval database

Figure 1: Examples of profile data